

R. G. CLYNE.
CARTRIDGE.

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1,060,817.

Patented May 6, 1913.

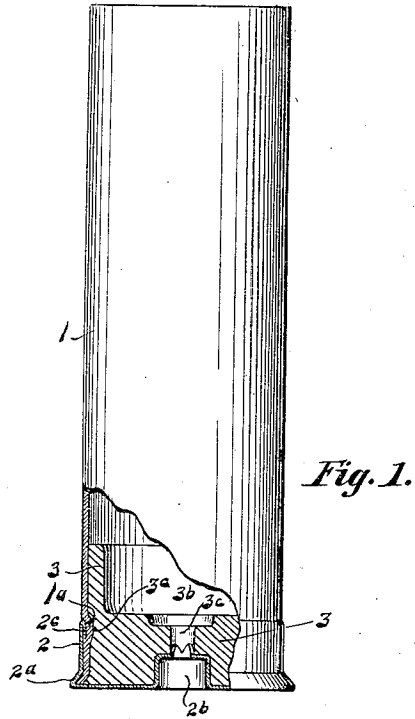


Fig. 1.

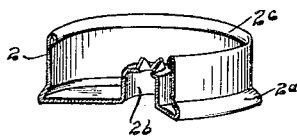


Fig. 2.

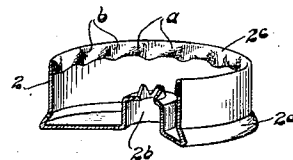


Fig. 3.

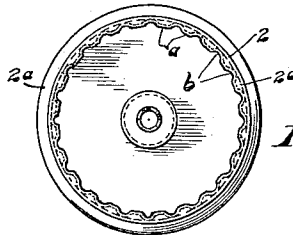


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CARTRIDGE.

1,060,817.

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To all whom it may concern:

Be it known that I, ROBERT G. CLYNE, a subject of the King of Great Britain, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Cartridges, of which the following is a specification.

My invention relates to improvements in cartridges, and more particularly to that class or type known as "paper shot shells", the primary object of the invention being to provide a generally improved cartridge of this class of exceedingly simple construction which will be cheap of manufacture, and efficient in use.

A further object is to provide a generally improved reinforced metallic base cap provided at its mouth or rim portion with an inwardly extending beading forming an interlocking or anchor member and preventing the tubular paper shell from being forced out of the cap at the time of firing, and also forming a baffle between the mouth of the cap and the tubular shell portion thereby preventing the escape of gases between these parts, and likewise forming a subjacent annular interlocking anchor or baffle between the subjacent portions of the shell and the base wad, thereby preventing the blowing out or disarrangement of these parts during firing and likewise preventing the escape of gases between the base wad and the tube.

A still further object is to reduce the cost of manufacturing the metallic base cap as compared with the ordinary form of base cap known as the "trimmed or chamfered cap" in which the chamfering or trimming is performed in a machine using a knife to bevel the mouth or upper edge of the cap about the inner periphery thereof so that the cap will readily slip over the tube during the operation of assembling, and which chamfering or beveling process is not only expensive but frequently results in imperfect caps due to dull tools and irregular alinement in the holding of the cap during the chamfering or trimming operation.

A still further object is to provide an improved metallic base cap having a smooth reinforced or non-expansible mouth or rim which will prevent the breaking or splitting of the cylindrical side walls of the cap during the operation of assembling when the

base wad and shell are forced into position or when the cartridge is fired.

With the above mentioned and other ends in view, the invention consists in the novel construction, arrangement, and combination of parts, hereinafter described, illustrated in some of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a side elevation of a cartridge constructed in accordance with my invention, a portion of the cap end being broken away for the purpose of clearer illustration of the parts. Fig. 2, a perspective view, partly in section, of a slightly modified form of the improved metallic base cap. Fig. 3, a similar view of a further modified form of same. Fig. 4, a plan view of the form shown in Fig. 3.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

The improved cartridge comprises a paper shell or tube 1, to which is secured the improved metallic base cap 2, and an inserted base wad 3, in the improved manner hereinafter referred to. The improved metallic base cap 2, is provided with the usual peripheral flange 2^a, for holding the cartridge in position within the breech of the gun barrel, while the base or bottom of the base cap may be provided with a battery cup receiving opening or primer pocket 2^b, as may be desired, for the reception of a battery cup or primer of any suitable and convenient form.

As a means for reinforcing the mouth or rim portion of the base cap 2, as well as providing a combined anchor and baffle member for interlocking with the paper shell or tube 1, as well as preventing the escape of gases between adjacent parts or the disarrangement of such parts during firing or the explosion of the combustible charge, the upper marginal edges of the base cap are curled or beaded inwardly forming a reinforcing anchor beading and baffle member 2^c, which beading projects inwardly about the inner periphery of the cylindrical side walls of the cap and forms a smooth round edge at the mouth of the cap for the purposes above mentioned and hereinafter more fully explained.

After the shell 1, and base cap 2, are assembled in proper position, the base wad 3, if of the type herein shown, may be inserted and pressed home and during the operation of pressing the base wad into proper position the reinforcing anchor beading and baffle member 2^c, at the mouth of the cap will be caused to embed itself into the subjacent or contiguous portions of the shell or tube thereby forming an annular interlocking rib or baffle portion 1^a, in the shell or tube 1, and likewise an annular recess portion 3^a, in the subjacent or contiguous portions of the base wad thereby securingly interlocking the parts together as against disarrangement or the escape of the gases or products of combustion during the firing of the shell. It will also be observed that the reinforcing anchor beading and baffle member 2^c, forms a smooth non-expansible mouth for the base cap which prevents the splitting of the side walls of the latter when the base wad is forced into position or during the firing of the cartridge or shell as sometimes occurs with the ordinary form of cartridge and metallic base cap now in use. The base wad 3, is preferably, though not necessarily, extended upwardly within the shell 1, beyond the plane of the mouth or reinforced portion 2^c, of the base cap and may be provided with a large receptacle or opening 3^b, terminating in a small centrally located opening or passage 3^c, leading to the ordinary battery cup mounted within the receiving opening or receptacle 2^b, of the base cap.

In Figs. 3, and 4, I have shown a slightly modified form of reinforcing anchor beading and baffle member, in which instance the upper marginal edges of the cylindrical side walls of the base cap are crimped or crenated

into a scalloped beading or baffle member having the ribbed portions "a", and depressed or indented portions "b", arranged at substantially regular intervals, and which scalloped or serrated beading is adapted to interlock with the subjacent shell for the purpose of preventing any circumferential movement between these parts.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood.

Having thus described some of the embodiments of my invention, what I claim and desire to secure by Letters Patent is,—

1. In a paper shell cartridge, a metallic base cap having its edges curled into a scalloped inwardly curled anchor beading.

2. In a paper shell cartridge, a metallic base cap provided with a battery cup receiving receptacle and a peripheral flange and having the upper marginal edges of its cylindrical side walls curled into an annular anchor beading and baffle member.

3. A cartridge, comprising a tubular member provided with an annular recess and an interlocking rib or baffle portion, a base wad provided with an annular recess portion in interlocking engagement with said interlocking rib or baffle portion, and a metallic base cap provided at its mouth with an inwardly extending annular beading seated in said annular recess of said tubular member.

In testimony whereof I have affixed my signature in presence of two witnesses.

ROBERT G. CLYNE.

Witnesses:

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